



DTE Energy®

Investigating Reports of Inside Leaks

John D Lueders, PE
Principal Compliance Engineer
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Investigating Reports of Inside Leaks

- **This is one Operator's perspective and methodology
– there is no single “right” way**
- **This presentation will cover the highlights of major steps in DTE Gas procedures**
- **These procedures are embedded in and a part of the DTE Gas Operation & Maintenance Plan**

Agenda

- **Receiving and Prioritizing Reports of Leaks**
- **Arrival and Initial Actions**
- **Leak Investigation INSIDE the Building**
- **Leak Investigation OUTSIDE the Building**
- **What to do if you CANNOT get inside**

Receiving and Prioritizing Reports of Leaks

- **Leak notifications may come from customers, the general public, from emergency responders, from excavators, and from Company personnel**
- **Leak notifications may be received through our dedicated Leak Line, by direct calls to Gas Dispatch and Gas Control, and even by persons flagging down a passing Company vehicle**

Receiving and Prioritizing Reports of Leaks

- **Based on information collected from the reporting entity, assign a priority to the Response Order:**
 - Priority 0 = Immediate Response**
 - Priority 1 = Immediate Response in the absence of any P0 Order**
- **Regardless of origin, ALL reports of leaks MUST be treated as natural gas until proven otherwise.**
- **For reports of leaks or odors OUTSIDE the DTE Gas service territory, we respond and take initial actions to protect people and then property until relieved by the local Operator**

Arrival and Initial Actions

- **Use all of your senses to scan the area, and rely on your Gas Detector for leak detection**
 - **DO NOT ring the doorbell – it could be a source of ignition!**
 - **Are the furnace and water heater in operation?**
Check the vapor from the chimney!
 - **What's with the spinning test dial on the meter??**
It could mean an open fuel line!
- **Take atmospheric readings at the entry portal.**
If combustible gas is detected,
 - **Clear the building of occupants and eliminate sources of ignition**
 - **Ventilate the affected area by opening doors and windows**
 - **Shut off the service valve if safe to reach it**

Arrival and Initial Actions (continued)

- **The Customer (or reporting entity) can be an excellent source of information**
 - **Where is it the worst?**
 - **How long have you noticed it?**
 - **Have you moved appliances recently?**
 - **Has there been excavating activity in the area?**
 - **Who was the excavator?**

- **Maintain control of the area while conducting your investigation**
 - **“Helpful” Customers really want to help, but may activate switches and equipment that are sources of ignition**
 - **Just say “Thank you” and ask them to keep away**

Leak Investigation INSIDE the Building

- **Use your Gas Detector to scan appliances and exposed fuel piping**
 - **Close appliance fuel valves – may need to disconnect and cap the pipe**
 - **Look for defects in flexible appliance connectors**
- **Continue using Gas Detector at the following INSIDE locations:**
 - **At point of entry of underground utilities: gas, water, sewer, conduit, and in ceiling above gas service entrance and along top of basement walls**
 - **At drains, sump wells and at cracks in floors and walls of basement**
 - **Around gas meter assembly, if located indoors**
 - **In crawl spaces or other openings below first floor in buildings without basements**
 - **Around electrical switches and receptacles**

Leak Investigation **INSIDE** the Building (continued)



- If a leaking component or appliance is discovered and you are authorized to and can make repairs or disconnect, do it
 - **ALWAYS** re-check after repairs to ensure you have eliminated **ALL** leaks by using soapsuds or a Gas Detector

BUT.....

**What if you discover that combustible gas
is coming in from *OUTSIDE*????**

Leak Investigation OUTSIDE the Building

- **CLEAR THE BUILDING, ELIMINATE IGNITION SOURCES, VENTILATE**
 - **Open doors and windows – DO NOT use powered openers**
 - **Contact the Power Company to disconnect at the pole**
- **Continue the investigation using Gas Detector at the following OUTSIDE locations:**
 - **Around outdoor meter assembly, or over service or fuel line at building entrance**
 - **At downspouts connected to a drain system**
 - **At street openings such as stop boxes, drains, vaults, manholes, street lamp bases**
 - **At joints and cracks in sidewalks and streets**
 - **Over utility entrances outside the building, if they can be determined**
 - **At outdoor appliances such as grills, pool heaters, and generators**

Leak Investigation OUTSIDE the Building (continued)



Be sure to penetrate deep enough through hard soils, ground cover, and frost

BUT.....

What if you discover that combustible gas
is coming in from ***SOMEWHERE ELSE????***

Leak Investigation OUTSIDE the Building (continued)



- **EXPAND to adjacent buildings and area to define Hazard Zone**
 - Check outbuildings and across the street
 - Use same list of locations to check for combustible gas as before
- **We use either electronic recordkeeping or paper forms to document out findings: our “Form 70 Leak Evaluation Report”**

Leak Investigation OUTSIDE the Building (continued)



DTE Energy DTE Gas

LEAK EVALUATION REPORT

COMPLAINT ADDRESS	MUNICIPALITY	NEAREST CROSS STREET	REFERENCE NUMBER	REPORT DATE
SOURCE OF COMPLAINT OR REPORT OF LEAK <input type="checkbox"/> LEAK SURVEY <input type="checkbox"/> CUSTOMER <input type="checkbox"/> EXCAVATOR <input type="checkbox"/> OTHER		<input type="checkbox"/> GAS ENTERING BUILDING <input type="checkbox"/> GAS AT BUILDING WALL <input type="checkbox"/> ODOR IN AIR <input type="checkbox"/> OTHER		
INITIAL CREW LEADER ASSIGNED	CREW LEADER - FIRST REFERRAL	CREW LEADER - SECOND REFERRAL	ONE-CALL TICKET NUMBER	INITIAL LEAK GRADE <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3

____ % INSIDE
____ % at Wall

Indicate NORTH

____ % INSIDE ____ % INSIDE ____ % INSIDE
____ % at Wall ____ % at Wall ____ % at Wall

____ % INSIDE
____ % at Wall

____ ST. ____ WIDE

____ ST. ____ WIDE

____ % INSIDE
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____ % at Wall

NOTE: Indicate addresses and investigation results for at least six (6) adjacent buildings. Sketch in mains and service lines. Indicate if other utilities involved, extent of gas spread (width AND length), distance from edges of spread to nearest building wall, gas concentration reads, bar holes with location numbers, repairs made, and any other helpful information.

Leak Investigation OUTSIDE the Building (continued)



- **A word about Excavation Damage:**
 - Plastic materials are typically punctured or parted at point of impact
 - Metallic materials can be punctured or parted at point of impact
 - Pipe can be pulled from compression fittings, sometimes a distance from point of impact
 - Be sure to expand your Investigation perimeter far enough to address the extent of damage

BUT.....

**What if you discover that combustible gas is entering from Outside,
and *Nobody is Home*????**

What to do if you CANNOT get inside

There may be times when you need to enter a building to conduct your Investigation

- **Customers are not always home – working, vacations**
- **Customers are unwilling or unable to respond to your knocking on the door**
- **Businesses are closed or vacant**

What to do if you CANNOT get inside (continued)

- **Even if you cannot enter, you can still check for combustible gas:**
 - **Around windows and doors and other building openings**
 - **At the service or fuel line entrance**
 - **At downspouts connected to a sewer system**
 - **At street openings such as stop boxes, drains, vaults, manholes, street lamp bases**
 - **At joints and cracks in sidewalks and streets**
 - **Over utility entrances outside the building, if they can be determined**
 - **At outdoor appliances such as grills, pool heaters, and generators**

- **If your gas meter is located outdoors:**
 - **Look for a spinning Test Dial which may indicate an open fuel valve or uncapped fuel line**
 - **Close and secure the service valve**

What to do if you CANNOT get inside (continued)

- If you have reason to believe that a hazardous condition exists, and the building is secured or there is no response:
 - You have a human responsibility to protect persons
 - You have an Operator responsibility to protect persons and property
 - Michigan Technical Standard R 460.2373 allows shut-off of gas service without notice, so don't wait to terminate service - **GET IN NOW**
 - ✓ Does a Neighbor have a key?
 - ✓ If locked doors and windows are encountered, engage a locksmith and law enforcement to assist with gaining access

What to do if you **CANNOT** get inside (continued)

- **Evacuate and Ventilate**
- **Close and secure the service valve if it is safe to do so**
- **If the service valve is inaccessible, cut the service line on the exterior of the building.**
 - ✓ **Don't forget to call 811 to request an Emergency Excavation Mark-Out from MISS DIG Systems**
- **ALWAYS re-check after repairs to ensure you have eliminated ALL leaks**
- **Arrange for return visits to get inside adjacent buildings even if they did not exhibit outside readings**

Thank you for your attention!

QUESTIONS?

Now, get out there and Be Safe!